

Begin

REEL # 227  
Kirillov, V.K.

KIRILLOV, V.K.

My experience in working with proof color prints of geographic maps  
and atlases. Sbor.st.no kart. no.6:65-70 '54. (MLBA 10:9)  
(Cartography)

KIRILL, U.K.

507/6-92-7-4/25

**Sokolova, O. I.**

57(2), 3(4)  
ATTENTION:

Revista of the Competition for the Best "Improving  
Suggestion (Izgi kouturme ne lachbaysa rationalizatsiye  
produsheniye)

17-21 (1958)

**ABSTRACT:**[illegible]

The 2nd prizes of 750 rubles were awarded to: 1) Ye. I. Bratolauka, V. M. Varugina, Ye. M. Galkovskiy, O. P. Zheller; 2) I. V. Gurevich, V. M. Varugina, V. P. Stoyanov (USSR) for "Technology of the Use of Standard Glass (Alumina Removal)".

Card 1/6

[illegible]

Card 2/6

Card 3/3

2011/6-93-7-4/22

### Results of the Competition for the Best Learning Question

[illegible]

9/8/85

2/5 9/6

Page 6/8

KIRILLOV, V.K., starshiy elektromekhanik

Use of a lifting jack for replacing rail stands with reinforced concrete stands. Avtom. telem. i svyaz' 4 no.9:31 S '60.  
(MIRA 13: 9)

1. Malovisherskaya distantziya signalizatsii i svyazi Otktyabr'skoy dorogi.

(Electric lines--Poles)

1. KIRILLOV, V.M. Eng.
2. USSR (600)
4. Fishing-Bulgaria
7. Fishing in Bulgaria., Ryb.khoz., 28, No.11, 1952

9. Monthly List of Russian Accessions, Library of Congress. February 1953. Unclassified.

KOZULIN, N.A.; GORLOVSKIY, I.A.; KIRILLOV, V.M., red.; FOMKINA, T.A.,  
tekhn.red.

[Equipment for paint and varnish factories] Oborudovanie  
zavodov lakokrasochnoi promyshlennosti. Leningrad, Gos.nauchno-  
tekhn.izd-vo khim.lit-ry, 1959. 477 p. (MIRA 13:3)  
(Paint industry--Equipment and supplies)



L 8306-66 EWT (m) / EWT (1) / T RPL NW/DJ/RM  
 ACCESSION NR: AP5028432 SOURCE CODE: UR/C153/85/008/004/0691/0696  
 AUTHOR: Shchuplyak, I. A.; Taganov, N. I.; Kirillov, V. M.  
 ORG: Department of Machines and Instruments for the Chemical Industries, Leningrad  
 Technological Institute im. Lensevsk (Kafedra mashin i apparatov khimicheskikh proizvod-  
 stv, Leningradskiy tekhnologicheskiy institut)  
 TITLE: Study of the sealing capacity of gaskets from polymeric materials  
 SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 8, no. 4, 1968, 691-695  
 TOPIC TAGS: hermetic seal; polyvinyl chloride, polyethylene, polytetrafluoroethylene  
 ABSTRACT: The conditions under which the tightness of flanged joints is achieved by using  
 polymer gaskets were studied experimentally by using a special stand with an oil pump.  
 The investigated materials were polytetrafluoroethylene (VTU MKhP 4138-56) and gasket PVC plasticized with  
 matinal treatment of the

... 138-55) and gasket PVC plasticized resin (VTU M-172-84) Polystyrene VD  
mathematical treatment of the experimental data yielded an equation expressing the relationship

Card 1/2

UDC: 63164-762.42

Card 4/4

2

FIRILIOV, V.M.

Position and year of capture during the holding of the fishing  
operation policy. Study Andarniro no.16:127-  
1971. (1971 12:1)

(fishing note)

TIMOSHUK, A.S.; TAGANOV, N.I.; KIRILLOV, V.M.

Design of packing glands. Izv.vys.ucheb.zav.; khim. i khim.tekh. 8  
no.2:338-342 '65. (MIRA 18:8)

1. Leningradskiy tekhnologicheskij institut imeni Lensoвета, kafedra  
mashin i apparatov khimicheskoy promyshlennosti.

KOTOMKINA, A.I.; KIRILLOV, V.P.; DZUTSEVA, A.V.

Exhibitions and displays of special items. Inform. biul.  
VDNKH no.8:11-12 Ag '63. (MIRA 17:8)

1. Glavnyy inzh.-metodist pavil'ona "Toplivnaya promyshlennosti i geologiya" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Kotomkina). 2. Glavnyy inzh. i glavnyy metodist pavil'ona "Lesnoye khozyaystvo, lesnaya i derevoobrabatyvayushchaya promyshlennost'" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Kirillov). 3. Glavnyy metodist ob'yedinennogo pavil'ona "Pishchevaya promyshlennost" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Dzutseva).

ACC NR: AT6028386

(N)

SOURCE CODE: UR/0000/65/000/000/0243/0256

AUTHOR: Anashin, Yu. F.; Cavelya, A. P.; Kirillov, V. N.; Tychkova, M. V.

ORG: none

TITLE: Geophysical investigations in searching for water in desert and semidesert areas of Kazakhstan

SOURCE: International Geological Congress. 22d, New Delhi, 1964. Geologicheskiye rezul'taty prikladnoy geofiziki (Geological results of applied geophysics); doklady sovetских geologov, problema 2. Moscow, Izd-vo Nedra, 1965, 243-256

TOPIC TAGS: prospecting, geophysic expedition, underground water, water, desert/Kazakhstan, geophysic prospecting, ~~depression, resistivity~~, tellurometry,

ABSTRACT: Numerous geophysical investigations in searching for water have been conducted in Kazakhstan during recent years. In addition to surveys based on special techniques, wide use has been made of the information available from other types of geophysical investigations conducted in the areas of interest. A summary prognostic map of fresh-water development in the northern part of the Turgay depression has been compiled from the resistivity maps made from vertical electrical-sounding measurement. Large areas of the deserts in central and southern Kazakhstan have previously been considered arid. In these areas intrusive and effusive rocks are either exposed or covered by thin loose deposits. Geophysical methods have been used in prospecting for water fracture deposits. The areas favorable for drilling water wells have been selected. Different modifications of resistivity profiling and magnetic and gravity prospecting have been applied. Geophysical investigations for water have proved

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ACC NR: AT6028386

highly effective in Kazakhstan. Boreholes and pits sunk at sites recommended by geophysicists have struck potable water in 287 of 322 localities. The experience of the geophysicists of Kazakhstan can be of great use in prospecting for water in desert and arid regions of Asia and Africa under similar geohydrological conditions. Orig. art. has: 7 figures.

SUB CODE: 08/ SUBM DATE: 06Jan65/

Card 2/2

SOV/91-59-8-13/28

8(6), 25(1)  
AUTHOR:

Kirillov, V.P., Deputy Shop Supervisor

TITLE:

A Machine for Restoring the Insulation of Coil Wires

PERIODICAL:

Energetik, 1959, Nr 8, pp 19-22 (USSR)

ABSTRACT:

The author describes in detail the machinery and the methods used for restoring the insulation of copper wiring of burnt electric motors. Copper wires of 0.5-3 mm wi be braided by a two-layer cotton insulation. A diagram of the braiding machine is shown in fig.1. The productivity is 14 kg of winding wire per shift. A kinematic diagram of the braiding machine is shown in fig.2. The machine is powered by a 0.25 kw electric motor developing 1450 rpm. Detailed data on transmission ratios are furnished. The wire to be insulated may be moved at speeds ranging from 1.28 m/min to 0.19 m/min. The rebuilding of the insulation consists of the following phases: Removing of the copper wire from the motor, burning the old insulation, straightening of the wires, welding of sections and braiding. For removing windings glued together by varnish, the entire stato. must be placed for

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SOV/91-59-8-13/28

**A Machine for Restoring the Insulation of Coil Wires**

about 14-18 hours into a tank filled with a 10% solution of caustic soda at a temperature of 60-80°C. The stator must then be washed in flowing water for about 12-16 hours. The burning of the old insulation is performed at 500°C for about 30-40 minutes. The wire is then pickled in a 5% sulfuric acid solution for about 10 minutes. The wire ends are welded electrically by means of a device shown in fig.3. The welded wire is then coiled and braided. There are 3 diagrams.

Card 2/2

KIRILLOV, V. P., Cand Biol Sci -- (diss) <sup>The</sup> ~~Pine~~-feeding silk-worm -  
Dendrolimus pini L. - in the forest belts of Semipalatinskaya Oblast  
of the Kazakh SSR. (Biology and methods of control.)<sup>A</sup> Alma-Ata, 1958.  
18 pp (Min of Agriculture USSR, Kazakh State Agr Inst), 110 copies  
(KL, 15-58, 114)

-21-

USSR/General and Systematic Zoology. Insects. Harmful  
Insects and Acarids. Forest Pests.

P

Abs Jour : Ref Zhur - Biol., No 3, 1959, No 11563

Author : Kirillov V.P.

Inst : Institute of Zoology AS KazSSR.

Title : Mass Propagation of the Pine Moth in the Belt of  
the Pine Forests in Kazakhstan.

Orig Pub : Tr. In-ta zool. AN KazSSR, 1958, 8, 127-129.

Abstract : Mass outbreaks of the pine moth in the belt of  
pine forests of Kazakhstan are connected with  
the growth of small nidi on a large area. The  
area in 1956 extended to 98,000 hectares. Avi-  
ation spraying of the forests in the spring of  
1956 with 5.5% DDT dust insured the death of the  
caterpillars.

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S/139/60/000/01/025/041  
E032/E414

AUTHORS: Yeponeshnikov, V.N., Kirillov, V.P., Kuz'min, V.N.  
and Petrov, Yu.K.

TITLE: The Dynamics of the Effective Angle of a Sector in  
Accelerators with Straight Line Sections

PERIODICAL: <sup>19</sup>Izvestiya vysshikh uchebnykh zavedeniy, Fizika,  
1960, Nr 1, pp 139-144 (USSR)

ABSTRACT: The design orbit in accelerators with straight line sections is usually in the form of a closed curve consisting of four straight line sections connected by four circular arcs of radius  $r_0$  and subtending an angle of  $90^\circ$  at the centre. One of the necessary conditions for the actual orbit to coincide with the design orbit is that the magnetic field should be zero over the straight line sections and uniform over the other sections. However, owing to leakage, the true magnetic field always differs from the design field so that it is always necessary to introduce the concept of the effective angle of a sector and this is defined by ✓

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S/139/60/000/01/025/041  
E032/E414

The Dynamics of the Effective Angle of a Sector in Accelerators  
with Straight Line Sections

Eq (1). The actual distribution of the field is normally of the form indicated by Fig 1. The effective angles of sectors will decrease at low fields owing to eddy currents and residual induction. They will also decrease at high fields owing to saturation effects. This will lead to the appearance of a well-defined fourth harmonic of the distortion of the design orbit, and to a reduction in the maximum energy of the accelerated particles. In the case of inductive acceleration, the betatron ratio is also affected. All these effects have been investigated by the present authors using a plane model. The effects have been found to be small towards the end of the acceleration cycle. They have the biggest effect at the beginning of the cycle. In the latter case the amplitude of the fourth harmonic of the design orbit becomes comparable with the radial dimension of the working region and the change in the betatron ratio may be of the order of a few

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S/139/60/000/01/025/041  
EO32/E414

The Dynamics of the Effective Angle of a Sector in Accelerators  
with Straight Line Sections

tenths of a percent. The reduction in the sector angle may be compensated at the beginning of the acceleration cycle by increasing the injection energy. The field at sector edges may be corrected by d.c. current method.. There are 5 figures and 2 references, 1 of which is Soviet and 1 English.

ASSOCIATION: NII pri Tomskom politekhnicheskome institute  
imeni S.M.Kirova (Scientific Research Institute of the  
Tomsk Polytechnical Institute imeni S.M.Kirov)

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SUBMITTED: April 3, 1959

Card 3/3

**KIRILLOV, V.S., dotsent; TSARENKO, A., veterinarnyy vrach.**

Milk therapy for cows in parturient paresis and mechanism of its function. Veterinarlia 30 no.12:36-39 D '53. (MIRA 6:11)

1. Moskovskiy khimiko-tekhnologicheskii institut yasnoy promyshlennosti.

KIRILLOV, V.S.

~~Veterinary obstetrical practices.~~ Veterinaria 31 no.2:56-58  
Ja '53. (MLBA 6:12)



KIRILLOV, V. S.

KIRILLOV, V. S. From veterinary surgical practice. <sup>Per</sup> (pre)material submitted to the editorial office.)

So: Veterinariya; Vol. 31; No..1; January 1954; Uncl.  
TABCON

GARBER, R.I.; KIRILLOV, V.S.

Change in the spectral distribution of optical density caused by light scattering in plastic deformation of rock salt crystals. Kristallografiia 7 no.1:142-144 Ja-F '62. (MIRA 15:2)

1. Umanskiy gosudarstvennyy pedagogicheskiy institut.  
(Rock salt—Optical properties)

GARBER, R.I.; KIRILLOV, V.S.

Spectral distribution of the optical density of plastically  
deformed rock-salt crystals. Ukr.fiz.zhur. 6 no.6:755-758 N-D '61.  
(MIRA 16:5)

1. Umanskiy pedagogicheskiy institut.  
(Rock salt crystals—Optical properties)

KIRILLOV, V. S.

KIRILLOV, V. S.- "Theory of the Design of Plates for the Roadway Portion of Inclined Bridges." Min of Higher Education USSR, Moscow Automobile and Highway Inst imeni V. M. Molotov, Moscow, 1955 (Dissertations For Degree of Candidate of Technical Science)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

KIRILLOV, Vyacheslav Sergeevich, kandidat tekhnicheskikh nauk; GOLUBKOVA,  
Ye.S., redaktor; MAL'KOVA, N.V., tekhnicheskii redaktor

[Prestressed metal structures in foreign countries] Predvaritel'no  
napriazhennye metallicheskie konstruktsii za rubezhom. Moskva,  
Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1956. 39 p. (MLRA 10:2)  
(Bridges, Iron and steel)

OSTROVIDOV, Aleksey Mikhaylovich; KUZNETSOV, Ivan Alekseyevich; KIRILLOV,  
V.S., kand.tekhn.nauk, red.; MAL'KOVA, N.V., tekhn.red.

[Tables for designing bridges] Tablitsy dlia proektirovaniia  
mostov. Moskva, Nauchno-tekhn.isd-vo avtotransp. lit-ry, 1959.  
535 p. (MIRA 12:6)

(Bridges--Design)

KHAZAN, Iosif Abramovich; KIRILLOV, Y.S., dots., kand. tekhn. nauk, retsenzent; KLYUCHAREV, V.A., dots., kand. tekhn. nauk, retsenzent, red.; POPOV, G.D., inzh., retsenzent; GANYUSHIN, A.I., red. izd-va; DONSKAYA, G.D., tekhn. red.

[Steel highway bridges abroad] Stal'nye avtodorozhnye mosty za rubeshom. Moskva, Nauchno-tekhn. izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1961. 150 p. (MIRA 14:6)  
(Bridges, Iron and steel)

GIBSHMAN, Yevgeniy Yevgen'yevich, prof., zasl. deyatel' nauki i tekhniki RSFSR, doktor tekhn. nauk; KALMYKOV, Nikolay Yakovlevich, prof. [deceased]; POLIVANOV, Nikolay Ivanovich, prof.; KIRILLOV, Vyacheslav Sergeyevich, dots.; IL'YASEVICH, S.A., doktor tekhn. nauk, prof., retsenzent; DEBERDEYEV, B.S., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Bridges and other road structures] Mosty i sooruzhenia na dorogakh; obshchii kurs. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp.i shosseinykh dorog RSFSR, 1961. 813 p. (MIRA 14:12)  
(Road construction)



TUMAS, Yevgeniy Viktorovich, kand. tekhn. nauk; FILIMONOVA, Ninel' Lavrent'yevna, inzh.; SHTIL'MAN, Yefim Iosifovich, kand. tekhn. nauk; KIRILLOV, V.S., kand. tekhn. nauk, dots, re-tsenzent; GANFUSHIN, A.I., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Use of wire-reinforced concrete in bridge construction]Primenenie strunobetona v mostostroenii. Moskva, Avtotransizdat, 1962. 134 p. (MIRA 15:10)

(Reinforced concrete construction)  
(Bridge construction)

ROSSIYSKIY, Vladimir Alekseyevich, prof.; NAZARENKO, Boris Pavlovich, kand. tekhn. nauk; SLOVINSKIY, Nikolay Aleksandrovich, kand. tekhn. nauk; GIBSHMAN, Ye.Ye., prof., doktor tekhn. nauk, retsenzent; KALMYKOV, N.Ya., doktor tekhn. nauk, prof., retsenzent[deceased]; POLIVANOV, N.I., prof., doktor tekhn. nauk, retsenzent; KIRILLOV, V.S., kand. tekhn. nauk, retsenzent; BASOV, S.Ye., inzh., retsenzent; PANKRATOV, V.M., inzh., red.; GANYUSHIN, A.I., red., izd-va; BODANOVA, A.P., tekhn. red.

[Examples of the design of precast reinforced concrete bridges]  
Primery proektirovaniia sbornykh zhelezobetonnykh mostov. Moskva, Avtotransizdat, 1962. 494 p. (MIRA 16:2)

1. Glavnyy spetsialist po mostam Khar'kovskogo otdeleniya Gosudarstvennogo proyektного instituta po promyshlennomu transportu (for Basov).

(Bridges, Concrete--Design and construction)

KIRILLOV, V.S.; TITOVA, V.A., red.; BARANOV, Yu.V., tekhn. red.

[Design of high pile gratings for highway bridge supports]  
Raschet vysokikh svainykh rostverkov opor avtodorozhnykh  
mostov. n.p. Rosvuzizdat, 1963. 40 p. (MIRA 16:12)  
(Bridges--Design and constructio)

KIRILLOV, V.S., kand. tekhn. nauk, dots.; GOLUBKOVA, Ye.S., red.

[Calculating buried abutments] Raschet obsypnykh ustoev.  
Moskva, Vysshaia shkola, 1964. 53 p. (MIRA 17:7)

AKSEL'ROD, Isay Solomonovich; AFAN'G'YEV, Mikhail Aleksandrovich;  
VEYNBLAT, Boris Markovich; GITMAN, Mark Borisovich, kand.  
tekhn. nauk; DUBROVSKIY, Aleksandr Ivanovich; KAMENTSEV,  
Vladimir Petrovich; KAMINSKIY, Boris Aleksandrovich, kand.  
tekhn. nauk; KOLOKOLOV, Nikolay Mikhaylovich; EPSHTEYN,  
Anatoliy Mordukhovich, prof.; KIRILLOV, V.S., kand. tekhn.  
nauk, red.; GOLUBEKOVA, Ye.S., red.

[Road engineer's manual; the construction of bridges and  
culverts] Spravochnik inzhenera-dorozhnika; stroitel'stvo  
mostov i trub. Moskva, Transport, 1965. 735 p.  
(MIRA 18:7)

1. KIRILLOV. V. V.
2. USSR (600)
4. Grapes
7. Novo-<sup>il</sup>nnenskii grapes. Sad i og.no<sup>il</sup>N '52.

9. Monthly List of Russian Accessions. Library of Congress, March 1953. Unclassified.

KIRILLOV, V.V.

"Investigation of the Operation and the Bases of the Parameters of a Row  
Weeder." Cand Tech Sci, Moscow Inst for the Mechanization and Electrification  
of Agriculture imeni V.M. Molotov, Min Higher Education USSR, Moscow, 1955.  
(KL, No 15, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations  
Defended at USSR Higher Educational Institutions (16)

KIRILLOV, V.V.

Investigating some circuits of dividing computers. Sbor.st.LITMO  
no.47:74-80 '59. (MIRA 16:10)



KIRILLOV, V.V.

YEFREMOV, G.V.; NOVIK, R.I., redaktor; KIRILLOV, V.V., retsenzent;  
BUTORIN, I.M., retsenzent; SEMENNOVA, M.M., redaktor; BEGICHEVA,  
M.N., tekhnicheskij redaktor

[Design and repair of vessels lacking self-propulsion] Ustroistvo  
i remont nesamokhodnykh sudov. Moskva, Izd-vo "Rachnoi transport,"  
1954. 247 p. (MIRA 8:4)  
(Barges) (Boat building)

*Kirillov, V. V.*  
USSR/Physics - heat transfer

FD-1067

Card 1/1      Pub. 153 - 3/24

Author        : Petukhov, B. S.; Detlaf, A. A.; and Kirillov, V. V.

Title         : Experimental investigation of local heat transfer of a plate in a  
                 subsonic (up to 260 m/sec) presonic airflow with turbulent boundary  
                 layer

Periodical    : Zhur. tekhn. fiz., 24, No 10, 1761-1772, Oct 1954

Abstract      : The authors show that the influence of air's compressibility and energy  
                 dissipation upon heat transfer can be taken into account by relating  
                 the heat transfer coefficient to the difference between the surface and  
                 body temperatures. They present the data for airflows with Re up to  
                  $2 \cdot 10^6$  and M up to 0.8 and describe the test method developed by them.  
                 The results are found applicable for both high and low speeds. They did  
                 not investigate the influence upon the heat transfer of the dependence  
                 of the physical parameters of the gas on temperature and moisture con-  
                 tent of the air.

Institution   : -

Submitted     : July 30, 1954

KIRILLOV, V.V., Cand Tech Sci. - (USSR) "Experimental study of local heat  
emission in the turbulent flow of gas in tubes at high velocity."  
Moscow, 1958. 15 pp (Min of Higher Education USSR. Len Order of Lenin  
Power Engineering Inst ), 150 copies (IL, 44-58, 100)

S/112/60/000/05/09/023

Translation from: Referativnyy zhurnal. Elektrotehnika, 1960, No. 5,  
pp. 308-309, # 4.4211

AUTHOR: Kirillov, V. V.

TITLE: Experimental Investigations of a Computer for the СТД (STD)  
Stereometer

PERIODICAL: Sb. rabot stud. nauchn. o-va. Leningr. in-t tochnoy mekhan. i  
optiki, 1958, No. 35, pp. 57-65

TEXT: The author describes a computer developed for the automatic computation of the excess  $h$  of one point of a region over another when measuring the difference in longitudinal parallaxes with the stereometer. The computer contains an electronic compensating circuit, solving equations in the form of  $h(b + \Delta p) - H\Delta p = 0$ . The addition  $b + \Delta p$  is effected by feeding the output voltage of a differential potentiometer, whose slider moves proportional to the magnitude of  $h$ . With the aid of the potentiometer a voltage is produced which is in proportion to the product  $h\Delta p$ . The voltages to be compared are transmitted to the amplifier of the servo system which operates the slider of the output potentiometer. Investigation results of the computer model are cited. There are 5 figures.

Card 1/1

V. V. V.

✓B

KIRILLOV, V.V.; PETUKHOV, B.S.

Studying the heat exchange during a turbulent high-speed gas flow  
in pipes. Nauch. dokl. vys. shkoly; energ. no.1:155-160 '58.  
(MIRA 11:10)

1. Rekomendovano kafedroy TOT Moskovskogo energeticheskogo instituta.  
(Heat exchangers) (Aerodynamics)

KIRILLOV, V.V.

AUTHORS: Petukhov, B. S., Dr.Tech.Sc. and Kirillov, V.V., <sup>26-11-12/24</sup> Eng.

TITLE: Concerning heat exchange during the turbulent flow of liquids in pipes. (K voprosu o teploobmene pri turbulentnom techenii zhidkosti v trubakh).

PERIODICAL: Teploenergetika, 1958, No.4, pp. 63-68 (USSR).

ABSTRACT: Most published works on the semi-empirical theory of heat-exchange regard the flow of liquid in a tube as consisting of two or three layers. A velocity distribution law or impulse exchange law is selected for each of the layers. This very rough representation often leads to considerable differences between theory and experiment when Prandtl's number is greater than 10 - 20. The present article gives a theoretical calculation of heat-exchange during turbulent flow of a liquid in tubes, basing the calculation on the law derived by Reichardt for the change of velocity across the section of the tube. This equation is well-founded theoretically and fully verified experimentally. An equation for the coefficient of turbulent exchange of impulse associated with the velocity distribution equation is given. A theoretical calculation is then made of heat-exchange during turbulent flow in tubes of Card 1/4 a liquid of constant physical properties. Expressions

Concerning heat exchange during the turbulent flow of liquids in pipes. 06-4-12/24

that cannot be integrated analytically are integrated numerically; hence Nusselt's number is expressed as functions of Reynolds' and Prandtl's numbers in Tables 1 and 2. Calculated results for Prandtl's number greater than 0.71 are compared in Fig.2 with Karman's theoretical formula and Mikheyev's empirical formula. Over the range of Prandtl's number greater than 0.7 and less than 10 the calculated values are within 7% of those given by Karman's formula. However, at higher Prandtl numbers Karman's curves are lower and when Prandtl's number is 20 they are almost horizontal. Analysis of the results shows that for calculations of heat-exchange during turbulent flow in pipes it is best to use the equation for the coefficient of turbulent exchange of impulse. Fig.3 gives the relationship between Nusselt's and Prandtl's number when the latter lies between 0.001 and 0.1 and Reynolds' number lies between  $10^4$  and  $10^6$ . The majority of investigations on heat-exchange during turbulent flow of liquids in pipes has been made over quite a narrow range of Prandtl numbers for small temperature heads, when changes in the physical properties

Card 2/4

96-4-12/24

Concerning heat exchange during the turbulent flow of liquids in pipes.

of the liquid are insignificant. Heat-transfer measurements were therefore undertaken using water, transformer oil and oil Grade MC under conditions in which there is a considerable change in viscosity with temperature. Other physical properties were also changed but over narrower limits. The characteristics of the experimental data thus obtained and also those of Kreith and Summerfield, which are referred to later, are given in Table 3. The results of the tests for two oils and water are plotted in Fig.4. The experimental points agree well with one another and give a smooth curve in the ordinates used; the scatter of the test points being no more than 10-15%. The results presented in Fig.4 show that theoretical calculations correctly represent the relationship between the Nusselt, Reynolds and Prandtl numbers not only when the physical properties are constant but also when there is a considerable change in viscosity with temperature. A new design formula is offered on the basis of the tests and theoretical calculations. It is valid for values of Reynolds number from  $10^4$  to  $10^6$  and for Prandtl's Card 3/4 number from 0.7 to 200. Existing empirical formulae are



Concerning heat exchange during the turbulent flow of liquids in pipes. <sup>96-4-12/24</sup>

adequate only over a much narrower range than the formulae proposed here.

There are 4 figures and 18 references - 3 German, 9 English, 6 Russian.

ASSOCIATION: Moscow Power Institute.  
(Moskovskiy Energeticheskiy Institut).

AVAILABLE: Library of Congress.

Card 4/4

KIRILLOV, V.V.

Investigating oscillations of a fluid in an immovable container taking  
its outflow into account. Trudy MFTI no.5:62-72 '60. (MIRA 13:10)  
(Fluid dynamics)

PETUKHOV, B.S., doktor tekhn.nauk; KIRILLOV, V.V., kand.tekhn.nauk

Heat exchange in the process of turbulent flow of a compressible  
gas in pipes of the region from M to 4. Teploenergetika 7  
no.5:64-73 My '60. (MIRA 13:8)

1. Moskovskiy energeticheskiy institut.  
(Heat--Radiation and absorption)

ACCESSION NR: AP4004147

S/0294/63/001/002/0254/0259

AUTHORS: Kirillov, V. V.; Malyugin, Yu. S.

TITLE: Local heat transfer in gas flow in pipes at a high temperature gradient

SOURCE: Teplofizika vy\*sokikh temperatur, v. 1, no. 2, 1963, 254-259

TOPIC TAGS: high temperature gradient flow, turbulent gas flow, high temperature research, gas flow, heat transfer, turbulent flow, thermal conductivity

ABSTRACT: Since most earlier research has been devoted to heat transfer averaged over the length of the tube, the results of which make it difficult to disclose the influence of individual factors on heat exchange, the present paper reports a procedure and results of an experimental investigation of local heat transfer in the case

Card 1/13

ACCESSION NR: AP4004147

of turbulent flow of gas in tubes under arbitrarily large temperature drops. The research was also aimed at accumulating data on heat exchange under such conditions. A stainless steel (1Kh18N9T) tube 1.54 mm in diameter and 212 mm long was used and the heating was by electric current. The small tube diameter made it possible to obtain relatively large Reynolds numbers with low gas flow. The experiments were made under "isothermal heat transfer" conditions, i.e., with temperature factor values close to unity. The results for  $Re > 25,000$  agree with the theoretical formula of the Moscow Power Engineering Institute (B. S. Petukhov and V. V. Kirillov, Teploenergetika, No. 4, 1958)

$$Nu = \frac{(\xi/8) Re Pr}{4.5\sqrt{\xi} (Pr^{2/3} - 1) + 1.07}$$

Card 2/4

ACCESSION NR: AP4004147

where  $\xi = (1.82 \log Re - 1.64)^{-2}$ . The main data obtained in the test for nitrogen were tabulated. The results are compared with those obtained by others, with particular attention to analogous work done by the Vsesoyuznyy teploenergicheskiy institut (All-Union Heat Engineering Institute). The work was performed in the Nauchno issledovatel'skiy institut vyssokikh temperatur (Scientific Research Institute of High Temperatures) of the Moscow Power-Engineering Institute under the guidance of Professor B. S. Petukhov. Orig. art. has: 4 figures, 5 formulas, and 1 table.

ASSOCIATION: Nauchno issledovatel'skiy institut vyssokikh temperatur (High Temperature Research Institute)

SUBMITTED: 29Jun63

DATE ACQ: 26Dec63

ENCL: 01

SUB CODE: PR, AI

NO REF SOV: 006

OTHER: 004

Card 3/4

KIRILLOV, V.V., inzh.

Automating the processing of stereophotos taken from on board  
ship. Izv. vys. ucheb. zav.; geod. i aerof. no.4:75-78 '64.

(MIRA 18:2)

1. Leningradskiy institut tochnoy mekhaniki i optiki. Rekomen-  
dovana kafedroy schetno-r. hayushchikh priborov.

L 38801-56 EWT(d)/T/ENP(1) IJP(c) GG/BB/GD

ACC NR: AT6008565

SOURCE CODE: UR/0000/65/000/000/0144/0154

AUTHOR: Kirillov, Y. V.

Org: none

TITLE: Simulation of a hand-written character recognition procedure

SOURCE: AN SSSR. Institut nauchnoy informatsii. Chitayushchiye ustroystva (Reading devices). Moscow, VINITI, 1965, 144-154

TOPIC TAGS: computer application, character recognition, adaptive print reader, circuit design

ABSTRACT: There are many problems in the input of information into computers, for the solution of which, on the one hand, it is difficult to use key or digit typesetting devices, and on the other hand, it is undesirable to use card-punching equipment despite its relative reliability. Computer input of manuscript documents without restrictions, however, is not feasible at present. Nonetheless the risk of the development of automata which read manuscript texts will be justified if the effectiveness of the input is raised in only a limited range of problems. Limitations imposed by the class of the problems of input, the size of the document, and the rules of the composition of the document simplify the selection of an optimal rule for the recognition of characters. The most rational rule for the composition of documents is the writing in of characters into a line of the document, which to some

Card 1/2



L 38801-66

ACC NR: AT6008565

1)

degree reduces the speed of the composition of the document, rather than the writing in of each character into a box. Furthermore, it is not at all complicated to search for a character in the line. However, the input of short digital blanks will still be used as an auxiliary method supplementing the primary method (by means of cardpunching equipment). Taking into consideration the small size of the document, a simple and reliable device with a reading element immovable and relative to the document may be developed. All the restrictions will not be overburdening if the limitations are imposed on the kind of problems fed into the device and for which the error risk is low. Furthermore, the solution time amounts to 10 — 15 sec. The selection of the simplest scanner (across the line of the document with 15 — 20 scans per character) may complete the general part of the determination of the input procedure. The author discusses such devices and proposes a procedure. The method is calculated for use with the "Strela" electronic computer. Orig. art. has: 12 formulas, 11 figures, and 3 tables.

.08]

SUB CODE: 09 / SUBM DATE: 09Sep65 / ORIG REF: 003

Card

2/2

KIRILLOV, Valerian Valerianovich; DMITRIYEV, I.N., retsenzent;  
MATVEYEV, L.T., otv. red.; YASNOGORODSKAYA, M.M., red.

[International System of Units of Measurement (SI) in  
meteorology] Mezhdunarodnain sistema edinits izmerenii  
(SI) v meteorologii. Leningrad, Gidrometeoizdat, 1965.  
150 p. (MIRA 19:1)

ZHADANOV, O.K. (Moskva); KIRILLEV, V.V. (Moskva); KON'KOV, V.V. (Moskva)

Processing for solving a regulation (planning and control)  
problem. Zhur. vych. mat. i mat. fiz. 5 no.1:150-155 Ja-F  
'65. (MIRA 1814)

ACC NR: AT6026766

SOURCE CODE: UR/2754/66/000/005/0031/0050

AUTHOR: Gavrilova, N. S.; Kirillov, V. V.

ORG: none

TITLE: Propagation of long wavelength waves. Computation of coefficients of reflection of plane waves from a nonhomogeneous anisotropic plasma

SOURCE: Leningrad. Universitet. Problemy difraktsii i rasprostraneniya voln, no. 5, 1966. Rasprostraneniya radiovoln (Radio wave propagation), no. 4, 31-50

TOPIC TAGS: plasma wave propagation, radio wave propagation, LF propagation, ionospheric propagation

ABSTRACT: The reflection properties of the ionosphere in the region of kc frequencies is studied. The problem is formulated mathematically for day and night models of the electron density distributions which take into account the presence of the earth's magnetic field. The admittance and reflection matrices were computed on the M-20. They show that at low frequencies (<10-15 kc) the change in electron density gradients has a negligible effect on these quantities. The results further show the effect of the angle of incidence of the broadcast wave on the ionosphere. The quasi-Brewster effect is found to have some influence on the reflection coefficients; the magnetic field effects are small when grazing incidence angles are considered. An error analysis of

Card 1/2

ACC NR: AT6026766

the analytical method indicates that frequency regions can be selected where the accuracy of the results is very good. For illustration, several numerical examples have been worked out. The results show that the effect of uncertainty in the initial conditions on the reflection and admittance coefficients is of the order of a few percent for realistic cases. Orig. art. has: 7 figures, 12 formulas, 3 tables.

SUB CODE: 17,20/      SUBM DATE: none/      ORIG REF: 004/      OTH REF: 017

Card 2/2

KIRILLOV, V.Ya.

Mechanical counter of beta rays emitted from metallometric samples. Razved.i okh.nedr. 28 no.11:51 N '62. (MIRA 15:12)

1. Altayskaya geofizicheskaya ekspeditsiya.  
(Radioactive prospecting--Equipment and supplies)  
(Counting devices)

FEDOROV, V.A.; KIRILLOV, V.Ye.

Millet in Tambov Province. Zemledelie 23 no.11:42-46 N '61.

(MIRA 14:12)

1. Tambovskaya oblastnaya gosudarstvennaya sel'skokhozyaystvennaya  
opytnaya stantsiya.

(Tambov Province--Millet)

KIRILLOV, Ye A.

"Reactive Changes in the Peripheral and Certain Central Divisions of the Nervous System Caused by the Action of Immune Sera, Vaccines, Antitoxins, and Toxins (Experimental Histological Investigation)." Dr Med Sci, Khar'kov State Medical Inst., Ivanovo, 1953.  
(KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug.55 - Survey of Scientific and Technical Dissertation Defended at USSR Higher Educational Institutions.  
(14)



KIRILLOV, Ye. A.

KIRILLOV, Ye. A.; BROUN, Zh. L.; CHIBISOV, K. V.

Investigation of the chemical sensitization of photographic emulsions.  
Dokl. AN SSSR 102 no. 6: 1159-1162 Je'55. (MLRA 8:10)

1. Chlen-korrespondent Akademii nauk SSSR (for Chibisov) 2. Fizicheskiy  
institut Odesskogo gosudarstvennogo universiteta imeni I. I. Mechnikova  
(Photographic emulsions)

The absorption spectrum of a Lippman emulsion treated with  $0.3 \times 10^{-7}$  to  $0.3 \times 10^{-5}$  m-thiourea at pH 10.17 resembles that of hydrazine-treated emulsions; and the rise in sensitivity is of the same order for both reagents. This suggests that thiourea causes increase in the number of primary active centres of the AgBr crystallites.

USSR/Human and Animal Morphology. Integument

S-4

Abstr Jour : Ref Zhur - Biol., No 20, 1958, No 92849

Author : Kirillov Ye.A.

Inst : Ivanovsk Medical Institute

Title : Morphological Investigation of Nerve and Other Tissue Elements  
of Human and Animal Skin with Antivariolic Vaccination

Orig Pub : Sb. nauchn. tr. Ivanovsk. med. in-ta, 1957, vyp. 12, 341-348

Abstract : A histological investigation was made of the skin parts of 16 rabbits, 7-30 days after the application of the variolic detritus. Along the nerve fibres, loop-formed structures, matted glomera, figures of retrograde growth, etc., have been observed which lead to the hypernerve of the given innervation field. On the corresponding parts of the human skin changes in the nerve fibres and ends have been detected during 2-10 months after vaccination. Thus, the nervous system of the skin retains the imprint of the contact with the rash for a considerable time.

Card : 1/1

KIRILLOV, Yevgeniy Aleksandrovich; PYLAYEVA, A.P., red.; TRUKHINA, O.N.,  
tekh. red.

[Finances of collective farms] Finansy kolkhozov. Moskva,  
zd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1962. 183 p.  
(MIRA 15:3)

(Collective farms—Finance)

KIRILLOV, Yeygeniy Aleksandrovich; MISEYUK, K.A., red.; TELEGINA, T.,  
tekhn. red.

[Financing and issuing credit to agriculture] Finansirovanie  
i kreditovanie sel'skogo khoziaistva. Moskva, Gosfinizdat,  
1963. 222 p. (MIRA 16:12)  
(Agriculture—Finance)

KIRILLOV, Ye, A. [deceased]; YAROSLAVTSEV, A.D.

Scraping crystallizer. Mash. i نفت'. obor. no. 1:27-33  
'63. (MIRA 17:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy  
institut neftyanogo mashinostroyeniya.

KIRILLOV, Ye.A. [deceased]; RAKITYANSKAYA, O.F.

Role of F centers in the adsorption of dyes by the halide  
crystals of alkali metals and silver. Zhur. nauch. i prikl. fct.  
i kin. 10 no.1:28-34 Ja-F '65. (MIRA 18:4)

1. Odesskiy gosudarstvennyy universitet imeni Mechnikova.

BROUN, Zh.L.; KIRILLOV, Ye.A. [deceased]; CHIBISOV, K.V.

Comparative study of the chemical ripening and photolysis of  
photographic emulsions. Dokl. AN SSSR 161 no.3:624-626 Mr '65.  
(MIRA 18:4)

1. Chlen-korrespondent AN SSSR (for Chibisov).

1st and 2nd copies

3

CA

PROCESSES AND PROPERTIES INDEX

Voltaic photoelectric effect in silver halides. Preliminary communication. G. Kizilov, M. Kitalgoritski and A. Mikhlinov. *Acta Ph. Structura*. U. S. S. R., 1917 (1935) (in English); *J. Phys. Chem.* (U. S. S. R.) 7, No. 2 (1936) (in Russian).—Irradiation of pure monocryst. AgCl causes, to the electrodes produces an e. m. f. with max. values of  $8 \times 10^{-4}$  v. at 5000 Å. and  $2.5 \times 10^{-4}$  at 6000 Å. Illumination of the systems AgI/Ag and AgI/Au gave contact potentials with maxima at 5000 and 10,000 and minima at 4000 and 3000 for the 1st and with a max. at 7000 Å. and minima at the same points for the 2nd. The effects are interpreted as photochem. rather than barrier-film effects. F. H. Rothmann

ASAC-5.1.1 METALLURGICAL LITERATURE CLASSIFICATION

1st and 2nd copies



LIT AND THE CHINA		PROCESSING AND PROPERTIES MODE		LIT AND THE CHINA	
BC				2-1	
<p>Effect of plastic deformation on the inner photo-effect in silver chloride single crystals. R. A. KIMLOV and A. M. POLOVSKI (Fizikal. Z. Sovetskii, 1988, 9, 100-101).--The photo-current increases by 5-7% with stretching forces of 80-100 g. per sq. mm. but decreases sharply to 30-50% of the original val. with forces &gt; 300 g. per sq. mm.</p> <p>R. R.</p>					
<p>ASB-ELA METALLURGICAL LITERATURE CLASSIFICATION</p>					
20000 200000		200000 200000		20000 200000	
20000 200000		200000 200000		20000 200000	

Internal photoelectric effect and dark conductivity in silver chloride. R. A. Kirillov and I. Z. Levi (Phys. Inst., Odessa State Univ. *Z. Exptl. Theoret. Phys. (U.S.S.R.)* 17, 336-9 (1947) (in Russian). Short illumination (30-60 sec.) at room temp. of AgCl with wave lengths from 3800 to 4300 Å. brings about an increase of elec. cond.; the effect has a marked max. at about 4050 Å. The same samples exhibited a max. of the internal-photoelec. effect, at room temp. between 3130 and 3650 Å., at  $-40^{\circ}$  at 4050 Å. On cessation of the illumination, the cond. decays and reverts to normal within a few hrs. The decay is strongly accelerated by illumination with wave lengths above 4500 Å., with a flat max. around 4800 Å., coinciding with the position of a secondary max. of the photoelec. effect at  $-40^{\circ}$  after illumination with photochemically active light (Kirillov, C.A. 23, 1829); this sec. max. is unaffected by 2 hrs. illumination with 4500 Å. N. Thon

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**CIA-RDP86-00513R000722710001-1"**

SA

*Pure & Applied Sciences  
Related to Literacy*

937

535.215 : 546.571.31

The Internal Photoelectric Effect and the Conductivity in Darkness of Silver Chloride Crystals. E. A. Kurnitov and I. Z. Levi. *J. Phys. exptl. theor. U.R.S.S.*, 87, 336-339, Apr., 1947; *S. et I.P.*, 19, 187-188, May, 1948.—An increase has been observed in the conductivity in darkness of mono-crystalline sheets of silver chloride exposed to radiations of 300-400 m $\mu$  at the ambient temperature. After exposure the conductivity gradually decreases to its initial value. The rate of decrease can be considerably accelerated by exposure to light of wavelength greater than 450 m $\mu$ . The influence of wavelength and temperature on these two effects has been studied, and the results are compared with the spectral distribution of the internal photoelectric effect at the ambient temperature and - 40° C.

H.O.D.

1948

KIRILLOV, YE. A.

42050: KIRILLOV, YE. A. - O Spektre absorbtzii fotokhimicheskoi okrasennogo galoidnogo  
serebra. Donlod i preniya. Izvestiya Akad. nauk SSSR, Seriya Fiz., 1948, No 5,  
s. 533-40.- Bibliogr: 8 nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948

CA

✓ Absorption spectrum of photochemical colored silver

chloride. R. A. Kirillov (Odessa Univ.). *Izvst. Akad. Nauk S.S.S.R., Ser. Fiz.* 12, 533-40(1948); cf. C.A. 42, 1801d.—The ratios of transparencies of illuminated and nonilluminated AgCl, molten between 2 quartz plates, evapd. in a vacuum on quartz, on Lippman plates, and in photographic emulsion were measured with a double quartz monochromator between 240 and 3000 mμ. Illumination was made with 300-mμ radiation. Thirty max. of the ratio curve are tabulated. The spectrum of AgBr shows also a complex structure and most maxima are common to AgBr and AgCl. Five max. of AgCl and 6 max. of AgBr correspond exactly to maxima of the inner photoelec. effect, quoted from literature. The complex nature of the spectra is ascribed to atoms or small clusters of Ag, distributed on the surface or on lattice nodes and identical with centers of the inner photoeffect. S. Paksver

CA

3

absorption spectra in photochemically colored silver  
halides. E. A. Kirillov (Odessa Univ.). *Izv. Akad.  
Nauk S.S.S.R., Ser. Fiz.* 14, 823-8(1950); cf. C.A. 44,  
4330s).—The complex structure of the spectrum of photo-  
chem. coloration is due to unstable Ag groups formed by a  
small no. of atoms located on the surface of the Ag halide  
and only loosely bound to it. S. Faksver

KIRILLOV, YE. A.

Photochemistry

Light absorption by color centers in silver halide. Usp. nauch, fot., No. 1, 1951

Monthly List of Russian Accessions, Library of Congress, June 1952, UNCLASSIFIED





KIRILLOV, Ye.A., doktor fiziko-matematicheskikh nauk, saslusheennyy deyatel' nauki USSR; MARKHILVICH, K.I., redaktor; ZIBLYANOVA, T., tekhnicheskiiy redaktor.

[Fine structure in the absorption spectra of photochemically colored silver halides] Tonkaya struktura v spektre pogloshcheniya fotokhimicheskoi okrashennogo galoidnogo serebra. Moskva, Izd-vo Akademii nauk SSSR, 1954. 78 p. (MLA 7:11)

(Silver halides--Spectra) (Photographic chemistry)

KIRILLOV, YE. A.

USSR/ Physics - Spectrophotometry

Card 1/1 Pub. 43 - 29/62

Authors 1 Kirillov, Ye. A.; Brown, Zh. L.; and Chibrikov, K. V.

Title 1 Employment of the spectrophotometric method for the study of the chemical sensitization of photo emulsions

Periodical 1 Izv. AN SSSR Ser. Fiz. 13/6, 689-690, Nov-Dec 1954

Abstract 1 A differential spectrophotometric method, developed by Ye. A. Kirillov was utilized for the first time for the study of centers formed during chemical reduction and sensitization processes of silver bromide emulsions. The

reduction and sensitization processes of silver bromide emulsions. The sensitization was accomplished by immersion of the layer in a hydrazine solution. The effects of sensitization and aging were determined spectrophotometrically and then compared photographically for the purpose of determining the light sensitivity of the emulsions. Results obtained are briefly described. One USSR Reference (1951). Graph.

Institution : The I. I. Mechnikov State University, Physics Inst., Odessa

Submitted : .....

*Kirillov, E. A.*

USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 27/48

Authors : Kirillov, E. A.; Broun, Zh. L.; and Chibisov, K. V., Memb. Corres. of AN SSSR

Title : Study of the chemical sensitization of photo emulsions. Effect of the reducing agent.

Periodical : Dok. AN SSSR 19/3, 427-430, Sep 21, 1954

Abstract : Reduction sensitization experiments by treating a Lippmann AgBr emulsion in the form of layers applied on glass slides, with a hydrazine ( $N_2H_4 \cdot H_2SO_4$ ) solution, are described. The absorption spectrum of the emulsion layer, treated in a hydrazine solution, was measured and the results are shown in graph. It was found, on the basis of spectrophotometric measurements, that the physical essence of sensitization with hydrazine consists in the formation of silver centers which increase in number and size during increase in concentration of the solution. Three USSR references (1948-1953). Graphs.

Institution: The I. I. Mechnikov State University, Physics Institute, Odessa

Submitted : May 6, 1954

**KIRILLOV, E. A.**

USSR/Chemistry - Physical chemistry

Card 1/1 ; Pub. 22 - 26/49

Authors : Kirillov, E. A., and Nesterovskaya, E. A.

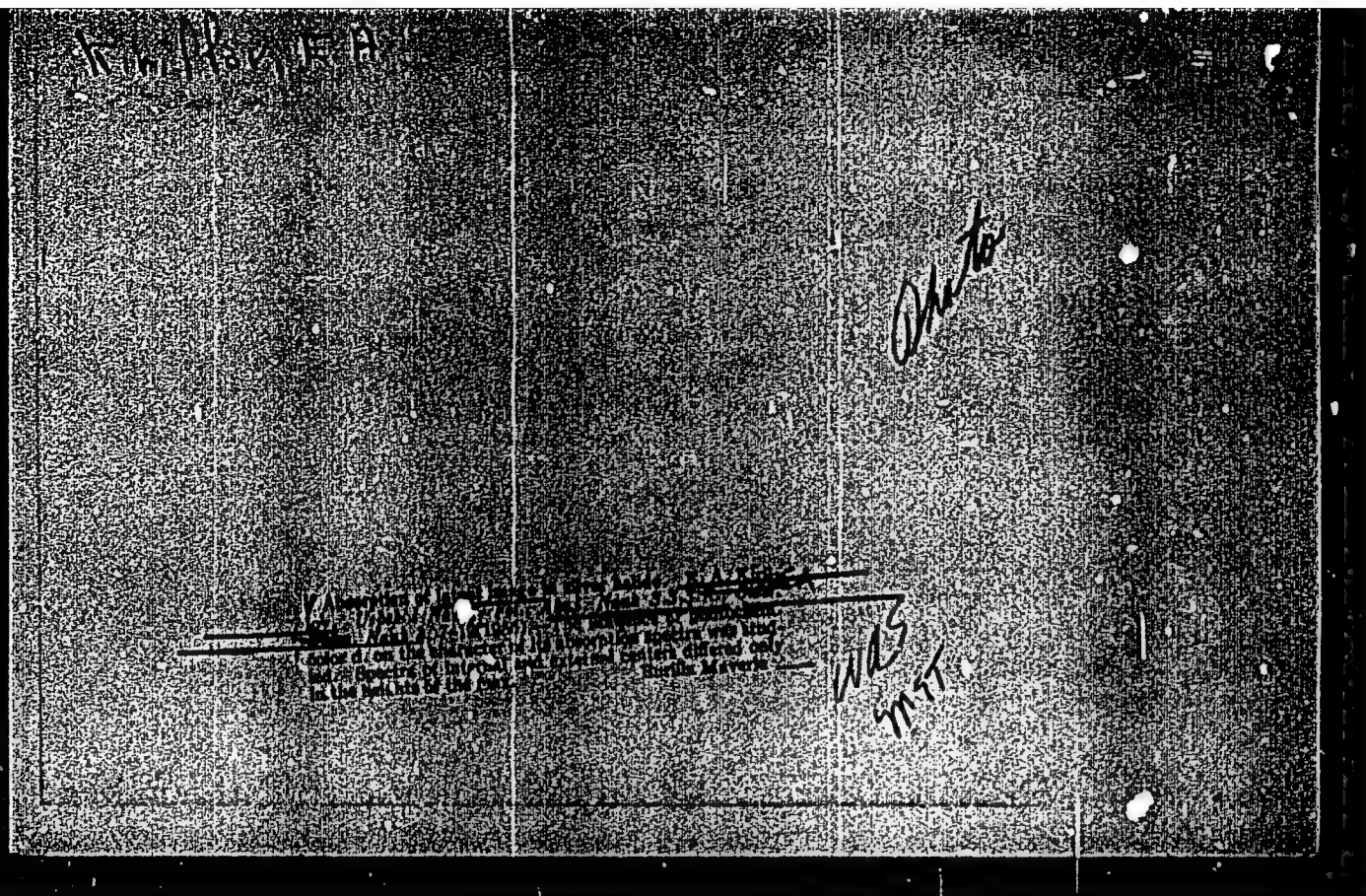
Title : Investigation of absorption spectra of primary centers in photo-emulsion grains

Periodical : Dok. AN SSSR 98/4, 609-610, Oct. 1, 1954

Abstract : In order to comprehend the nature of primary centers and the mechanism of the photo process the authors measured the absorption spectra of such primary centers without disturbing the homogeneity of the emulsion layer. The two individual methods employed in this study are described. The results are characterized by spectral curves shown in graph. The mean positions of the absorption maxima of the primary centers were computed from the spectral curves obtained by the two described methods. Three USSR references (1947-1954). Table; graphs.

Institution : The I. I. Mechnikov State University, Scientific Research Institute of Physics, Odessa.

Presented by : Academician V. A. Kargin, April 29, 1954



KIRILOV, Ye.A.

On the absorption spectra of silver halides and of thin silver  
layers. Zhur.tekh.fiz. no.12:2143-2149 0 '55. (MLRA 9:1)

(Silver halides--Spectra) (Photographic chemistry)



KIRILLOV, Ye. A. and NESTEROVSKAYA, Ye. A.

"The Structure of the Absorption Spectrum and the Bleaching-Out of  
Photochemically Colored Silver Halide," a paper given at the International  
Conference on Scientific Photography, Cologne, 24-27 Sep 1956

E-3072367



1-2-1-110V, Ye. P.

K-11

Category : USSR/Optics - Scientific photography

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 2658

Author : Broun, Zh.L., Kirillov, Ye.A., Chibisov, K.V.

Inst : Physics Inst. of the Odessa Univ., USSR

Title : Spectrophotometric Investigation of Chemical Sensitization of Photographic Emulsions.

Orig Pub : Zh. nauch. i prikl. fotogr. i kinematogr., 1956, 1, No 2, 98-110

Abstract : Chemical sensitization was studied with layers of Lipman emulsion, first processed in a solution of hydrazine, tin chloride, thiourea, or thiozanimine at 20° for 10--30 minutes. After the layer was washed and dried, the absorption spectrum was determined with a double monochromator from the ratio to the unprocessed layer in the 400--800 mμ region, with intervals of 2.5--5 mμ (using the Kirillov method). To determine the photographic action of these solutions, the compounds were exposed and developed in a glycine developer. The light sensitivity was determined from the threshold (using the Eder-Hecht wedge). It was established that when the layer of Lipman emulsion is treated with reducers (hydrazine, tin chloride) or with compounds with labile sulphur (thiourea or thiozanimine in alkaline medium) in certain concentrations, one observes a fine spectral structure, coinciding with the structure produced by photochemically-dyeing silver bromide or by vacuum spattering of silver. An analogous

Card : 1/2

Card 1-2-1-110V, Ye. P.

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000722710001-1

LEBEDEV, S.I., prof., doktor biolog.nauk, otv.red.; KOVBASYUK, S.M., dotsent, kand.istor.nauk, red.; PAZYUK, L.I., dotsent, kand.geologo-mineral.nauk, red.; KIRILLOV, Ye.A., prof., doktor fiziko-matemat.nauk, zaslushennyi deyatel' nauki USSR, red.; TSESEVICH, V.P., prof., doktor fiziko-matemat.nauk, red.; LEONOV, I.G., dotsent, kand.istor.nauk, red.; VOROB'YEV, A.I., prof., doktor biolog.nauk, red.; GAVRILOV, N.I., prof., doktor fiziko-matemat.nauk, red.; MOROZOV, A.A., prof., doktor khim.nauk, red.; DANILENKO, K.Ye., dotsent, kand.filolog.nauk, red.; MIGAL', K.G., dotsent, kand.istor.nauk, red.; SMIRNOV, A.M., dotsent, kand.geograf.nauk, red.; BABICH, N.M., tekhn.red.

[Scientific yearbook for 1956] Nauchnyi ezhegodnik 1956 g. Odessa, 1957. 388 p. (MIRA 12:4)

1. Odessa. Universitet. 2. Deystvitel'nyy chlen Ukrainskoy Akademii sel'skokhos.nauk, zaveduyushchiy kafedroy fiziologii rasteniy Odesskogo gosudarstvennogo universiteta im. I.I.Mechnikova (for Lebedev). 3. Zaveduyushchiy kafedroy istorii Ukrainskoy SSR Odesskogo gosudarstvennogo universiteta im. I.I.Mechnikova (for Kovbasyuk). 4. Zaveduyushchiy  
(Continued on next card)

*KIRILLOV, Ye.A.*

KIRILLOV, Ye.A.; NESTEROVSKAYA, Ye.A.

The action of light on the primary centers of a photographic layer. Zhur.nauch.i prikl.fot.i kin. 2 no.6:401-403 N-D '57.

(MIRA 10:12)

1. Nauchno-issledovatel'skiy institut Odesskogo gosudarstvennogo universiteta im. I.I.Mechnikova.

(Photographic emulsions)

*Kirillov, Ye.A*

NECHAYEVA, T.A.; KIRILLOV, Ye.A.

The optical mechanism of fine structure in the spectrum of thin layers of silver. Zhur.nauch.i prikl.fot.i kin. 2 no.6:404-407 N-D '57. (MIRA 10:12)

1. Nauchno-issledovatel'skiy institut fiziki Odesskogo gosudarstvennogo universiteta im. I.I.Mechnikova.  
(Silver halides--Spectra)

137-58-6-13233

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 294 (USSR)

AUTHORS: Kirillov, Ye.A., Nechayeva, T.A.

TITLE: Investigation of the Optical Mechanics of the Appearance of a Complex Structure in the Absorption Spectrum of Thin Crystal Layers (Issledovaniye opticheskogo mekhanizma yavleniya slozhnoy struktury v spektre pogloshcheniya tonkikh kristallicheskikh slojev)

PERIODICAL: Nauchn.yezhegodnik. Odessk. un-t, 1956, Odessa, 1957, p 145

ABSTRACT: Investigation of the nature of "fine" structure (FS) of the spectrum of light passing through a thin layer of metal on glass or quartz. The FS could be attributed to the phenomenon of absorption as well as to the phenomenon of light diffusion in the thin layer of dispersed metal. Experiments were carried out with thin layers of Ag on quartz and exposure of photosensitive layers. The apparatus permitted increasing or weakening the action of the diffused light. However, FS was always equally distinct. The results of the experiment corroborate the hypothesis that FS is due to actual absorption. I.D.

Card 1/1

1. Silver films--Optical properties 2. Silver films--Spectra 3. Light  
--Absorption

KIRILOV, Ye.A. [Kyrylov, Ye.A.]; POLISHCHUK, D.I.; S'ORA, T.Ya.  
[S'ora, T.IA.]

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(MIRA 11:4)

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nauk, zaslushennyi deyatel' nauki USSR, red.; SOLOMONYUK,  
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[Recent investigations of absorption centers in colored alkali  
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(Alkali halide crystals)

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AUTHOR: Kirillov, Ye.A., Nesterovskaya, Ye.A.

TITLE: On the Causes of Destruction of Selectivity in a Silver Halide During the Bleaching Process

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, 1959, Vol 4, Nr 3, pp 172-174 (USSR)

ABSTRACT: This is a study of the causes of the destruction of selective capacities of a silver halide in photographic emulsions, a phenomenon accompanying the bleaching process. The authors-convinced that the bleaching of the fine structure is a rather complicated process- limited their investigation to the study of the effect of monochromatic light (second exposure) on a silver halide, remaining during their experiments within the limits of the latent image produced by the first exposure. The authors used fine-grained silver bromide layers of the Lippman type. The preparations were exposed in the usual way until the latent image had formed, desensitized (green pinacryptol) and

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differentially measured in the spectrophotometer. Subsequently the preparations were exposed to the radiation of a wave of corresponding length and subjected again to measuring. The results are illustrated by graphs 1-4. A comparison between the curves of graphs 1-2, which illustrate absorption prior to and after the effect of green and red light ( $\lambda = 555$  and  $670 \text{ m}\mu$ ), makes evident, that under the effect of narrow spectral bands the fine structure undergoes a bleaching process, which results in a levelling of absorption. However, under these simple conditions too the phenomenon is not limited to the effective spectral band and can be also observed, to a minor extent, beyond its limits. The authors discuss the cause of this destruction of selectivity. They renounce the hypothesis of a thermal effect of the medium surrounding the centers, as the experiments carried out at low

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temperature did not show a remarkable improvement of selectivity. Concerning the effect of concentration, the experiments proved that the authors' selection of the latent image could weaken but not eliminate the bleaching effect beyond the limits of the effective light. The authors admit that the phenomenon resulting from the experiments can be explained on the basis of a theory developed by F. Seitz and K.S. Shifrin. In this case the particles are to be considered as silver molecules, which supply a spectrum of the molecular type, consisting of a series of zones. Graphs 3-4 show the results of experiments carried out on the basis of over-all exposure of the surface of the preparation to active light, subsequent desensitizing and partial second exposure to monochromatic light, the latter destroying particles of a defined type. In this case

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the differential measuring of the preparation in the spectrophotometer supplies a spectral curve corresponding to the particles, which were destroyed on half of the preparation. The authors point to the circumstance that these curves may well compare with the electronic absorption spectra of some organic compounds, e.g. solutions of diphenyl polyenes in benzene. There are 4 graphs and 11 references, 9 of which are Soviet, 1 German and 1 English.

ASSOCIATION: Odesskiy gosudarstvennyy universitet (Odessa State University) Nauchno-issledovatel'skiy institut fiziki (Scientific Research Institute of Physics)

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(Photography) (Kravets, Tarichan Pavlovich)